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South Carolina Naval Wreck Survey Completed

By James Spirek and Christopher F. Amer

Among the countless wrecked watercraft in South Carolina waters lies a body of naval vessels spanning the years from the American Revolution to modern times. The management of these sunken naval vessels in State waters and throughout the world falls under the responsibility of the Department of the Navy (DoN), with the Underwater Archaeology Branch of the Naval Historical Center (NHC) as the main arbiter of issues affecting these cultural resources. The DoN maintains custody of all its ships and planes, whether seemingly abandoned, regardless of last operational use, or lost in United States, foreign, or international waters. Only an act of Congress can divest the DoN of its titles or claims to this property. Under the aegis of the Department of Defense Legacy Resource Management Program, the NHC has turned to the states as co-stewards to help in developing management plans for these national treasures. In September 1998, the Maritime Research Division (MRD) received funding from a Department of Defense Legacy Resource Management Grant to develop a management plan for navy-owned shipwrecks in South Carolina waters. The grant funded the MRD to implement historical and archaeological research, remote sensing surveys, and to prepare a report and a GIS database of naval ship losses in state waters. In April 2004, the MRD completed the report "A Management Plan for Known and Potential United States Navy Shipwrecks in South Carolina," and a GIS database of archaeological information related to the USN shipwrecks. The following article provides a brief synopsis of the scope

and results of the project.

The project was conducted in two phases. The first phase focused on gathering historical, archaeological, and environmental information concerning the shipwrecks claimed by the Navy. The second phase concentrated on implementing remote sensing operations on selected shipwrecks and naval activity sites from the Civil War. To begin the project, the NHC provided the MRD with an inventory of 96 ship losses reportedly lying in South Carolina waters. The shipwreck inventory consisted of British warships, South Carolina naval vessels, Army vessels, blockade runners, and unidentified shipwrecks. Findings from our research were used to discriminate and select only 46 USN shipwrecks in the final inventory. Of these 46 shipwrecks, 31, or 67 percent of the total list, were associated with the First and Second Stone Fleets the Federals used to blockade the shipping channels into Charleston Harbor. Only one shipwreck was added to the inventory, *Robert B. Howlett*, a lightship used by the Federal Navy off Charleston (Fig. 1). Shipwrecks not included in the final inventory were

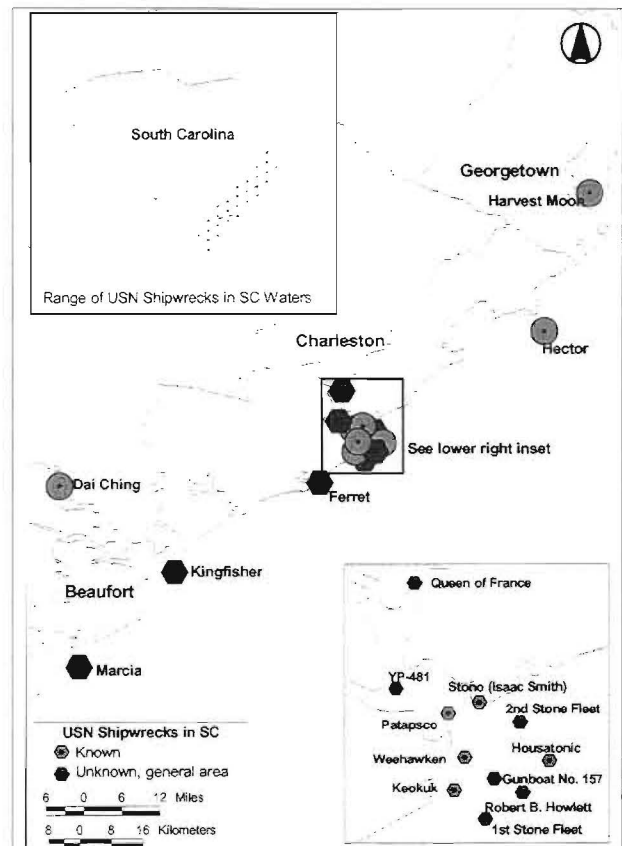


Fig. 1: Map showing distribution of US Navy shipwrecks in South Carolina waters. (SCIAA photo)

separated by various categories into new lists in the appendices, for example, Confederate warships and blockade runners or Foreign warships.

Historical and archaeological research in the first phase centered on two complementary avenues, 1) to develop an historical context of the U.S. naval presence in South Carolina from the birth of the Nation to recent times, and 2) to prepare individual histories of each shipwreck. In addition to developing the "life" history of each shipwreck, research also focused on the "death" history of the archaeological remains. Typically, post-mortem activities included contemporary salvage of the wreck shortly after sinking. In Charleston Harbor, the majority of Federal shipwrecks from the Civil

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War underwent extensive salvage operations by the U.S. Army Corps of Engineers in the 1870s to improve harbor navigation. Noted also were more recent salvage operations under license from SCIAA, as well as the only archaeological investigation carried out in South Carolina on a U.S. Navy shipwreck, *Housatonic*, by SCIAA, NHC, and National Park Service underwater archaeologists in 1999.

To develop potential research and management options, the shipwrecks were categorized, quantified, and qualified as a group. Several analytical categories were created to help characterize the wrecks namely, historical period, cause of shipwreck, salvage activity, location, and environmental context. In general, U.S. Navy shipwrecks in South Carolina waters date from the Antebellum period (1785-1865, predominately from 1861-1865), were scuttled, have not been salvaged, are situated in and around Charleston Harbor, their locations generally known, and have not been disturbed



Fig. 2: Sonogram showing wreckage of USS *Boston* in Ashepoo River. (SCIAA photo)

since their sinking. The scuttled First and Second Stone Fleets, however, skew the analysis to characterizing U.S. Navy shipwrecks to this observation. Ignoring these purposefully sunk vessels, and the scuttled *Queen of France* from the Revolutionary War and YP-481 from WWII, reveals that the next greatest reason for sinking in South Carolina waters was grounding, followed closely by enemy action. Causes of sinking and any subsequent salvage operations, both

contemporary and modern, have ramifications that affect the structural integrity and artifactual content of each shipwreck. Other impacts include natural and cultural factors that effect the preservation of a shipwreck and include erosion, biological and chemical degradation, dredging, and artifact collecting. Examination of the circumstances and environments of the navy shipwrecks in the inventory offer a management tool by which to prioritize and direct resources for future archaeological inquiry by South Carolina and Navy submerged cultural resource managers.

The second phase of the project included conducting remote sensing operations on a limited number of shipwrecks and areas of naval activity sites from the Civil War. Archaeological and environmental information obtained during this phase helped to assess and to prepare a baseline of a site's condition for future reference by researchers and managers. The primary area of

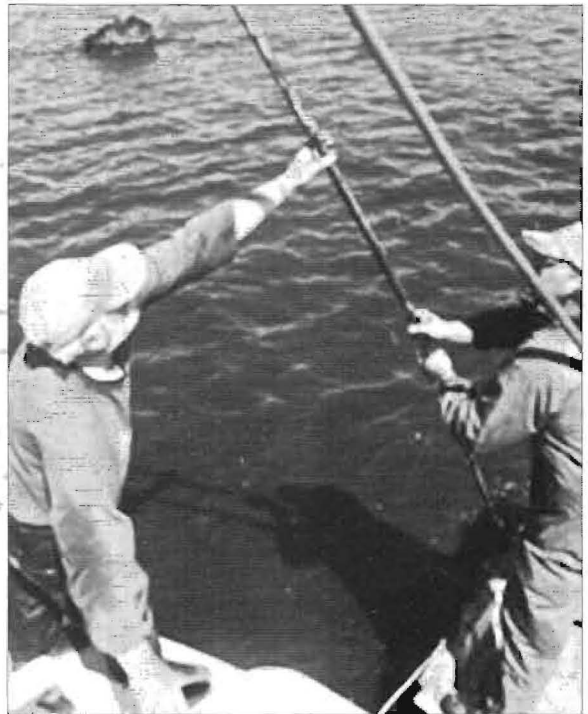


Fig. 3: Joe Beatty and Jim Spirek operate hydraulic probe near exposed section of smokestack of USS *Harvest Moon*. (SCIAA photo)

operation was in Charleston Harbor, and included surveys of USS *Patapsco*, an ironclad sunk by a torpedo (mine); USS *Weehawken*, an ironclad that foundered at sea; USS *Keokuk*, an ironclad sunk from damage sustained during battle; and USS *Housatonic*, a steam frigate sunk by the H.L. Hunley submarine. A second area of survey was Port Royal Sound, which was the operational headquarters of the South Atlantic Blockading Squadron. Several areas were surveyed and a number of magnetic and acoustic anomalies ground-truthed to determine their sources. A search was also made to locate the remains of the USS *George Washington*, an Army gunboat sunk in Whale Branch River. Additionally, preliminary site plans were prepared for two shipwrecks: the Skull Creek Wreck, previously discovered by SCIAA in 1985 and possibly related to Confederate or Federal naval activity, and the Station Creek Wreck, newly-discovered during the course of this survey, and thought to

represent the remains of a whaling vessel destined for the Stone Fleet but diverted for use as a floating machine shop (See Port Royal Sound Survey article in this issue, pages 25-28, for additional information about operations in this area). A third survey area was in the ACE basin (Ashepoo-Combahee-Edisto Rivers) to gather information about two Civil War vessels: USS *Dai Ching*, a navy gunboat sunk by a Confederate battery, and USS *Boston*, an army transport sunk during a combined operation with the navy. The fourth area centered on the Civil War wreck of the USS *Harvest Moon*, Admiral John Dahlgren's flagship, sunk by a torpedo in Winyah Bay.

All of the four areas were examined using the MRD's ADAP-III marine remote sensing ensemble. Electronic information obtained included magnetic, acoustic, and bathymetric data. Between the three sets of data, the information sought to characterize each site included: to delimit the extent of the site, to determine orientation of the main ship structure, to image exposed features, and to record the environmental setting. Magnetic data revealed the location of the shipwrecks, of which the majority were buried under several feet of sediments. Analysis attempted to determine the main orientation of the shipwreck and to take into account the scatter of structure during salvage activities, especially for *Keokuk*, *Weehawken*, and *Housatonic*. Acoustic imagery

revealed portions of the ship's structure, aiding in determining the structural integrity of the site, notably on the *Patapsco*, *Boston*, Skull Creek and Station Creek wrecks (Fig. 2). At the *Harvest Moon*, *Dai Ching*, and at several magnetic anomalies potentially associated with *George Washington*, the MRD used magnetic data to guide hydraulic probing operations to determine the amount of overburden and the extent of surviving structure (Figs. 3 and 4). Visual inspection by MRD staff

All of the results of the electronic data, probing, ground-truthing and geo-referenced historical charts were incorporated into a GIS project for analytical and archival purposes. The combination of the written report and the GIS database will provide submerged cultural resource managers convenient access to the project's findings for making timely management decisions regarding the sunken naval legacy in South Carolina. Additionally, the GIS project can swiftly incorporate new

data from future research endeavors.

The report and project concluded with several recommendations to guide future work concerning the navy shipwrecks including, continuing fieldwork, maintaining the GIS database, and developing other partnerships with the NHC. Hopefully, the information obtained during the project will serve to direct Federal and State managers as co-stewards as they chart a plan to preserve and protect the sunken naval legacy in South Carolina waters. For those wishing to obtain a copy of the report, a PDF-version will be available in the near future. Our thanks to the NHC, especially Dr. Bill Dudley, director and his staff, Dr. Robert

Neyland, Barbara Voulgaris, and Wendy Coble, as well as staff at USC and SCIAA, and others for their assistance in implementing and completing this project.

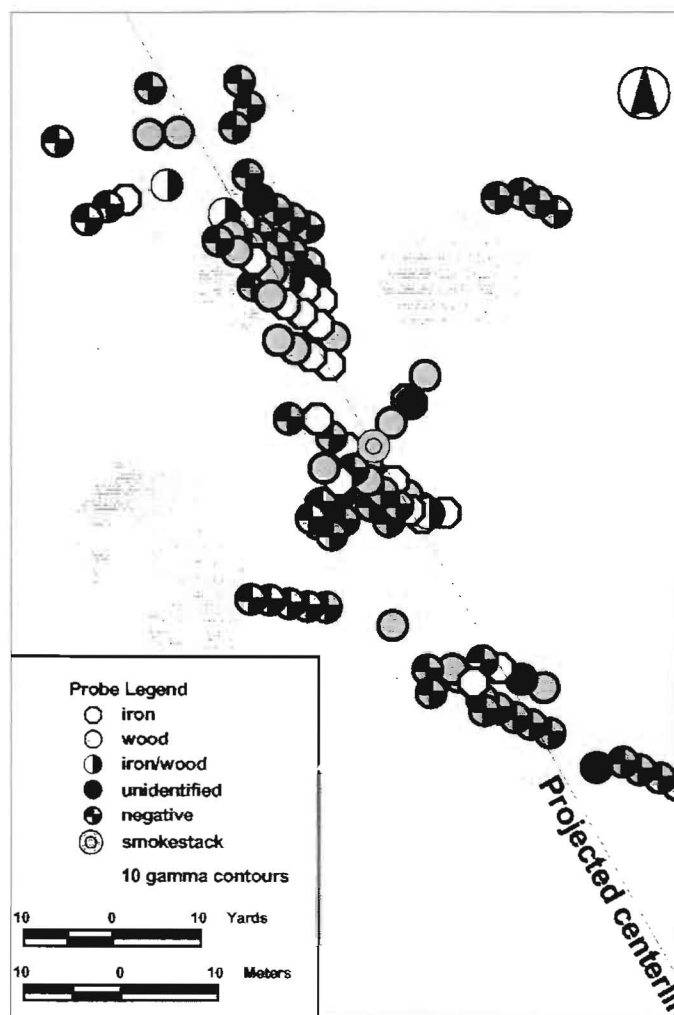


Fig. 4: Map showing results of hydraulic probing operations and projected centerline of USS *Harvest Moon*. (SCIAA photo)

concentrated on magnetic and acoustic anomalies in Port Royal Sound at two naval activity sites including the repair facility in Station Creek and the T-dock on Bay Point.